

Questioning and the 5Es model

PHASE OF THE INSTRUCTIONAL MODEL	PURPOSE OF THE PHASE	PURPOSE OF QUESTIONING	SAMPLE QUESTIONS
ENGAGE	<p>Create interest and stimulate curiosity.</p> <p>Set learning within a meaningful context.</p> <p>Raise questions for inquiry.</p> <p>Reveal students' ideas and beliefs, compare students' ideas.</p>	Broad questions that encourage students to discuss their ideas and experiences.	<p>What do you mean by...?</p> <p>Tell me more about...?</p> <p>I find that hard to understand – tell me...?</p> <p>What makes you think...?</p> <p>How do you know...?</p> <p>How did you find out about that idea?</p>
EXPLORE	<p>Provide experience of the phenomenon or concept.</p> <p>Explore and inquire into students' questions and test their ideas.</p> <p>Investigate and solve problems.</p>	Questions that encourage students to discuss their ideas and to express common experiences.	<p>How are you going to...?</p> <p>How will you be able to tell...?</p> <p>Is that the question you really want to ask?</p> <p>What will you do when...?</p> <p>It might be a good idea to think about...?</p> <p>How will you know if...?</p> <p>What do you need to find out more about...?</p> <p>Why are you doing it that way?</p> <p>How will you be sure it is a fair test?</p> <p>How did you arrive at that idea?</p>
EXPLAIN	Introduce conceptual tools that can be used to interpret the evidence and construct explanations of the phenomenon.	Focused questions that reinforce the explanation of the concept.	<p>What do you think others might think about this?</p> <p>How is that idea different to...?</p>

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EXPLAIN (Continued)	Construct multi-modal explanations and justify claims in terms of the evidence gathered. Compare explanations generated by different students/groups.		Some people say... Does that fit with your idea? How did you arrive at that idea? How will you be able to tell...?
ELABORATE	Use and apply concepts and explanations in new contexts to test their general applicability. Reconstruct and extend explanations and understanding using and integrating different modes, such as written language, diagrammatic and graphic modes, and mathematics.	Questions that help students understand the concept in a new situation.	As for <i>Explore</i> phase. How could you verify that? What will happen if...?
EVALUATE	Provide an opportunity for students to review and reflect on their own learning and new understanding and skills. Provide evidence for changes to students' understanding, beliefs and skills.	Questions that assess students' understanding.	How have your ideas changed? How is that different to...? It seems you're not sure about...? Do you have any questions about...? What have you found out? What else do we need to know? What else might you do to be really sure of that?